



THOMAS G. NEWMAN,
EDITOR.

Vol. XXIII. April 20, 1887. No. 16.



True Worth is in being, not seeming,
In doing each day that goes by
Some little good, not in the dreaming
Of great things to do by and by.
For whatever men say in their blindness,
And in spite of the fancies of youth,
There is nothing so kindly as kindness,
And nothing so royal as truth.

It is Announced that an apianian exhibition will be held in Vienna, Austria, this month, at the Botanical Gardens.

We Acknowledge the receipt of Nos. 1 and 2 of the British "Guilde-Book" Pamphlets. They are written by Mr. T. W. Cowan, editor of the *British Bee Journal*, and published by Mr. J. Huckle, Kings Langley, Herts. They describe the making of appliances for bee-keepers, in a very lucid manner, and are nicely illustrated.

"The Open Court, a new Fortnightly Journal devoted to the work of establishing Ethics and Religion upon a scientific basis." This is the title of a new periodical just started at 175 La Salle Street, Chicago, Ill., under the able management of B. F. Underwood, at \$3 a year. It is beautifully printed on good paper, and its articles are highly entertaining, representing all phases of religious thought.

Geo. Neighbour & Sons, of London, England, state that through the AMERICAN BEE JOURNAL and *Gleanings* Mr. Heddon and his "new hive" are "well known in England." In a recent letter, they say that as they wish to make some hives containing "some of the features" of Mr. Heddon's, and desire to "do honor" and "not be considered pirates," they send ten dollars as a "token of respect and appreciation." As the hive named is not patented in England, this shows that Messrs. Neighbour & Sons are most scrupulously honorable and just in their business relations. With pleasure, therefore, do we put this news item on record, as a pattern for bee-keepers everywhere.

Bees vs. Grapes.—Dr. B. F. Dunkley, of Missouri, writes thus to the *Rural World*:

Ten years ago a neighbor transferred some bees from a common box-hive into a movable-frame hive. He made holes in the sides of the frame and pushed in hard hickory pins to hold the combs in the new frames, and to make the combs safe he wrapped the frame round with spool cotton thread. The first thing the bees did was to stick the combs fast with wax, then they cut away all the threads, mended all the combs, and then ate out all the hickory pins where they came into a comb.

What a prodigious yarn. When bees will eat hickory pins and iron nails they ought to be chained up like tigers, and not allowed to roam at will!

Dr. D. makes a further statement in corroboration of the above. He says:

Many years ago I put a can of honey in my cellar, covered with two pieces of sack- ing, and over that a piece of oil-cloth; the first thing we knew the cellar was full of starving Italian bees (it was a very dry time), so full we could not go into it. They had cut their way through the covers and left half a six gallon jar of dead bees smothered in the jar, but no honey.

Now the bees are charged with cutting their way through oil-cloth, as well as eating hickory pins! Next it will be said that they cut through a brick wall, or an iron door!

Big Bee-State.—Mr. John H. Rupert, of Woodcock, Pa., states his complaint in these words:

About that "find of wild honey" in this State (page 179), the editor says: "Who says that Pennsylvania is not a bee-State?" No one says so that I know of!

As another proof that Pennsylvania is a big bee-State, I will add that, last fall, while out hunting with D. A. Harman, we saw bees in the top of a large chestnut tree; we cut the tree down and found one pint of bees and about a tea spoonful of honey.

I would like to ask Messrs. Cousins and McCracken how they let that honey down with a rope?

The word "big" was omitted by the printer. We wrote it thus: "Who says that Pennsylvania is not a big bee-State?" The experience of Mr. Rupert presents the exact opposite to that of "Cousins and McCracken"—but then it is an enormous State, big enough for all kinds of "experience"!!

If they did not "let the honey down with a rope," they said they "roped it in" all the same. The whole story is very "ropy."

"Where to Keep Honey?" is the title of Leaflet No. 3, uniform in size with Nos. 1 and 2, and published at the same prices. This is in accordance with the recommendation of Mr. G. M. Doolittle, on page 245 of this number of the BEE JOURNAL. Its judicious use will undoubtedly increase consumption. Heretofore we have printed the first line thus: "American Bee Journal Leaflet No. 2." We shall hereafter omit the words "American Bee Journal," and simply call them "Leaflet No. 2," or any other number, as the case may be.

Onions inhaled cause sleep, rest, and refreshment. The soldier on his march, and the exhausted worker gets great strength from eating the onion. Tie a fresh onion around the neck and bruise it to make its odor thorough, and you secure sound sleep from its nightly inhalation, so says Daniel R. Clymer.

J. R. Lindley, of Georgetown, Ill., died on March 6, after an illness of one week. He leaves a wife and three little children to mourn his loss. Mr. Lindley was at the Indianapolis convention, and we little thought then that it would be the last time he would attend such a meeting. We offer our condolence to the stricken family of the brother departed. May Heaven protect and bless the little ones. We hope he carried some life insurance. We do not believe any one has a right to bring children into the world, and then not provide for them in case of death.

We Wish to Add our testimony in favor of Alsike clover, says E. W. Powell in *Farm, Stock and Home*. We raise it for the honey it contains, but consider it a splendid grass, either for hay or pasture. Our practice is to sow timothy with it for hay, as it will fall down and mat if sown by itself. Of course we only speak from our limited experience, in our own soil, which is a sandy loam from which the timber has been cleared. Alsike can be cut but once each season for hay, but will make a fine fall pasture. It also bears seed the first crop, if there are any honey-bees in the neighborhood to fertilize the flower.

Bee-Keeping in Japan.—From *L'Apicoltore*, of Milan, Italy, we glean the following item of interest:

Chevallier J. Sartori, of Milan, was, a few days ago, favored with the visit of two Japanese delegates, viz., Messrs. G. R. Hida and H. Danke, Councillors of the Japanese Ministry of Agriculture and Commerce. The distinguished visitors had not been long in Mr. Sartori's well-known apiary before it became evident that they were not novices in matters connected with bee-keeping, as their numerous and pertinent inquiries plainly testified. Nothing, it appears, escaped their observation, and much interest was exhibited when examining the new large plates recently published by Mr. Sartori, with explanations in four languages. In fact, before bringing their visit to a close, they left an order for 400 sets of these illustrations for the Government of Japan, upon which notes will be inserted in the Japanese language. Of course, the natural beauty of the Italian bee was, of itself, an object of no small interest, and a few colonies were ordered for shipment to their country. They were, however, not a little surprised when Mr. Sartori placed before them two large plates illustrating Japanese bee-keeping. Before leaving, they expressed themselves highly pleased with what they saw in Mr. Sartori's noted establishment.

New Catalogues and Price-Lists are on our desk. Those desiring to obtain any of them should send to the addresses given—not to us. The following have arrived during the past week:

Thomas S. Wallace, Clayton, Ills.—4 pages—Queens.
E. A. Sheldon, Independence, Iowa—1 page—Apian Supplies.
Cheney & Comstock, Sac City, Iowa—2 pages—Bees and Supplies.

Eucalyptus Honey for Medicine.—M. Gullmith, the French traveler, while on a journey in Australia, discovered some bee-hives in a gigantic eucalyptus tree, of 120 metres in height. The honey was strongly scented with the perfume of the flowers of the tree. Prof. Thomas Karraman has examined it, and believes it to have beneficial medicinal properties.

Our Queries

With Replies thereto.

[It is quite useless to ask for answers to Queries in this Department in less time than one month. They have to wait their turn, be put in type, and sent in about a dozen at a time to each of those who answer them; get them returned, and then find space for them in the JOURNAL. If you are in a "hurry" for replies, do not ask for them to be inserted here.—ED.]

Bees Leaving Hives in January.

Query 406.—Can you give any reason why bees should swarm in January, leaving honey and brood in their hives, also queen-cells and a few bees? The day they swarmed it was very pleasant, and the sun was shining.—Louisiana.

Discontentment; something was wrong in the hive.—H. D. CUTTING.

We have known lack of pollen to cause them to leave, but there may be other causes, that we cannot know.—DADANT & SON.

They may have swarmed for the same reason that they usually do, only they were "rushing the season" a little.—W. Z. HUTCHINSON.

Such abnormal swarming is usually confined to weak colonies and to nuclei. They become discouraged and swarm out. Pleasant days after a stress of bad weather is the time they usually depart.—J. P. H. BROWN.

No. Being entirely unacquainted with the details of the case, and the actions of the bees in your latitude, I do not know whether it was satisfaction or dissatisfaction which caused them to swarm.—JAMES HEDDON.

This has long been a puzzle. It seems probable that the hive was in some way distasteful to the bees; but this is only a guess.—A. J. COOK.

I should say that it was what we call here at the North "swarming out." Dissatisfaction of some kind is thought to be the cause where bees so swarm here in April and May.—G. M. DOOLITTLE.

I suppose it is something as they might do at the North, in April or May. Sometimes it seems a mere whim, and sometimes a result, perhaps, of spring dwindling, not enough bees being left to take care of the brood before leaving.—C. C. MILLER.

Bees, sometimes in my early experience, left the hive most unaccountably. I now think the reason of their so doing was, the hive was too large for possible use. Probably in the case of the querist, too much room was given.—J. E. POND.

I can give reasons which are satisfactory to myself, but they may not be to others. I believe that bees never "swarm out" at a time when there is a quantity of young bees in the hive, unless they are absolutely starving. Three causes may contribute to the "swarming out" mania: First, starvation and discouragement;

second, a desire to supersede the queen, and third, when there are a few young bees in the hive, and the bees take a general flight—nearly all the bees take wing—there being no young bees to stay in the hive with the queen, she becomes excited and takes wing with the frolicking bees, and when out with the queen they may or may not return to their home without the interference of the apiarist.—G. W. DEMAREE.

I cannot give any reason from the data given. I have had fair colonies swarm out one or more times each day for a week, just after putting them out of the cellar. Sometimes they tried to enter other hives, which would demoralize matters. Such colonies, after they have had one flight, I shut in the hive and feed warm syrup until they learn to stay at home. If the day was warm and the bees appeared uneasy, I might release them toward evening. In this way I have saved many colonies from ruin.—C. W. DAYTON.

Abnormal swarming generally results from dissatisfaction with the hive, surroundings, weakness of numbers, or something else distasteful to the bees.—THE EDITOR.

Bees Sipping Blood.

Query 407.—Recently I was skinning a steer that had choked to death, when I saw several bees eagerly sip the blood as it flowed from the several veins. 1. Did any one ever notice bees do this before, and at what season of the year? 2. Can you suggest any reason for their gathering blood, as plenty of water was near them?—Mo.

It is not strange.—C. W. DAYTON.

I never saw anything of the kind, and I could not guess the reason.—G. M. DOOLITTLE.

Similar instances have been reported. There is probably something about blood that pleases the taste of bees.—W. Z. HUTCHINSON.

1. I never saw it. 2. Possibly they were after the salts in the blood.—C. C. MILLER.

Such statements have been made before. That bees are partial to such vital liquids is a fact, whether we always admire their taste or not.—A. J. COOK.

I never had any "blood suckers" among my bees; but I have noticed that bees sometimes resort in the spring of the year to stale water, particularly if it is alkaline. 2. I can assign no reason for their depraved appetite, unless it is a desire for salt.—J. P. H. BROWN.

2. The bees may have been without bee-bread and in need of nitrogenous food. Such bees may have been benefited by feeding them eggs or milk with syrup or honey; but in the experiment I once made in feeding eggs, I could not see that it was an advantage.—G. L. TINKER.

1. I never saw a case of this kind that I remember. 2. For the same reason that they gather many other substances, the reason for which we do not know.—H. D. CUTTING.

I have noticed that bees will work on the offal of slaughtered animals, and will visit the vaults of privies; and I have seen them sipping at the refuse of the soap kettle. I think that they are attracted by the salts nearly always present in such refuse matter.—G. W. DEMAREE.

I never heard of such a case before. Probably the bees found something in the blood that was needed. It may be the salt in the solution was the thing gathered. They probably went for the blood for much the same reason that they visit muck and manure heaps at times. Why is a mere matter of guessing.—J. E. POND.

Quite probably the bees needed the alkali found in the blood. Under certain circumstances they will take stale and salt water. They have been experimentally fed with eggs, meat and whisky by many at different times with doubtful effect.—THE EDITOR.

Eight-Frame vs. Ten-Frame Hives.

Query 408.—I use an 8-frame Langstroth hive; if I change to one having 10 frames, will I get fewer and larger swarms? Will I get more comb honey?—Y., Maryland.

Other conditions being the same, you would.—J. P. H. BROWN.

Yes, to both questions.—DADANT & SON.

No, not if rightly managed. To the second part I would say no, keep your old hives.—A. J. COOK.

You will get fewer and larger swarms. From foregoing reports in your latitude, you ought to get more honey.—C. W. DAYTON.

My experience says no to both questions; certainly no to the last, for this locality.—G. M. DOOLITTLE.

With 10 frames I think you will get larger colonies. As for the honey, it will depend upon the location.—H. D. CUTTING.

Likely you will get fewer swarms, and possibly less comb honey. I do not think there will be any material difference in the size of the swarms.—C. C. MILLER.

No, neither, but you will get wider lumber for covers and bottoms, and more ranges of comb in which your bees might starve to death in winter. You will both gain and lose some valuable functions. On the whole, I think you will lose more than you will gain.—JAMES HEDDON.

With proper management you would get no more swarms from the former than the latter, nor would the swarms be larger with but few exceptions. You would fail to get as much comb honey unless you practiced a system of contraction of the brood-chamber at the proper time.—G. L. TINKER.

I do not think any appreciable difference will be found. I prefer a 10-frame hive, as I can diminish or increase it to suit any contingencies that may arise. A large hive is better than a small one for that reason.—J. E. POND.

It would depend upon your management, as to whether you will get any more honey. With a good colony I have found that a section-case the right size for a 10-frame Langstroth hive will be filled as quick as a smaller one the proper size for an 8-frame hive, and the tiering-up will go on all the same. Of course the wider cases give a larger yield, because they hold more sections than do the narrow ones. The swarms are not always larger because they come from a larger hive. It is a well known fact that small hives encourage swarming. The 10-frame hive is best for this climate, as bees suffer less in the heated season, and we can contract them to suit the size of the colony at other times.—G. W. DEMAREE.

You will probably get larger swarms in many instances; in others not. You will also get more honey per colony in many instances; in others not. With a large brood-nest there is a liability of having considerable honey stored in the brood-nest, that might more profitably have been stored in the supers. Successful bee-keeping does not necessarily depend upon large yields.—W. Z. HUTCHINSON.

The difference is so slight that it would not pay to change. You might have the new hives to hold 10 frames, if so desired.—THE EDITOR.

For the American Bee Journal.

A Poetical Critique.

WM. F. CLARKE.

Dear sister Lou, that poetry [page 197]
Which tells your tale of woe,
Contains some words that seem to me
To read malapropos.

You want a better rhyme for "hum"—
"Sun" is not just the thing;
A word like "plum," or "drum," or "mum,"
The proper sound would bring.

"Mum" is the word, so please to write:
"The bees' melodious hum,
Was hushed, 'till near the noon-tide's height,
They kept no longer mum."

"Sublime" is not well matched by "shrine,"
"Time" is a better rhyme.
They must harmonious notes combine
Who would Parnassus climb.

"Arcadian haunts that poets love,
Their mystic charms combine,
To form a beautiful arch above
An apiarian shrine."

As "sell" and "veil" don't harmonize,
You want a mate for veil.
Therefore, suppose the rhymester tries
"Rail," "pail," "fall," "tale," or "sale."

Then read, "oh! oh! her comrade said,
My honey should bring sale
Four times as high—then sudden fled,
"A bee's got in my veil!"

If you your poetry would "sell,"
Like honey, it must be
Neatly sealed over, finished well,
And "fixed up to a T."

Guelph, Ont.

Leaflet No. 2, entitled "Alsike Clover for Pasturage and Hay," is now ready for delivery. This should be scattered into every neighborhood, in order to induce farmers to plant Alsike, that the bees may have the advantage of it for pasturage. We send them by mail 50 copies for 30 cents; 100 for 50 cents; 500 for \$2.25—all post-paid. It will pay bee-keepers to scatter these Leaflets, even if 9 out of 10 avail nothing. If ten farmers out of a hundred plant Alsike in any neighborhood, the bees will reap a very substantial reward.

Correspondence.

This mark ⊙ indicates that the apiarist is located near the center of the State named; ♂ north of the center; ♀ south; ♂ east; ♀ west; and this ♂ northeast; ♀ northwest; ♂ southeast; and ♀ southwest of the center of the State mentioned.

For the American Bee Journal.

House for Keeping Comb Honey.

G. M. DOOLITTLE.

I have been requested to give the readers of the AMERICAN BEE JOURNAL an article on "how to build, and the management of, a honey-house; i. e., a building in which to store surplus comb honey as fast as taken from the hives, in order to keep it in good condition, etc." This is a question of great importance to every producer of comb honey, and one that I feel incompetent to answer; but having had a little experience along that line, I will touch on that experience, and with it tell how I should build such a house for myself.

That honey often so deteriorates after being taken from the hive, that it is almost worthless, no matter how nice it is when harvested, shows the importance of this question, and if we can by any means provide a sure way, which is simple enough to be successful in the hands of the average bee-keeper, so as to keep our honey gaining in richness of flavor and greater density of body, as it does when left on the hive, less the travel stain of the bees, we shall have taken long strides toward the solving of how to create a demand for our production.

Still further, if we could simplify and reduce the plan so as to meet the wants of every consumer of honey, that they, too, could have every ounce of honey in their possession growing better with each week and month which passed away, instead of retrograding, we would hear less of low prices and over-production.

Put the question to the consumer of honey: What shall we do with honey to preserve its present condition, or make it a little better if possible? Nine out of ten will tell you that they keep it in the cellar, a greater mistake than which could not well be made. If Mr. Newman would get up a little pamphlet on "Where to keep honey," to go with his other excellent and instructive little books, to be distributed among the public, and for bee-keepers to hand to every one to whom they sold a pound of honey, I have no doubt but that it would increase the consumption of honey one-fourth at least, providing they (the consumers) will *believingly* read it. It matters not how much pains the apiarist may take to get his honey in nice shape for the consumer, if the consumer places it in a damp, cool cellar for two weeks before it is eaten. During that time the nice, good-flavored, well-ripened honey has changed to thin,

unripe honey, taking the flavor of the cellar or damp room, so as to be unsatisfactory to the taste, and by the end of a month it has so deteriorated as to be nearly unpalatable. All should know, whether apiarist or consumer, that a dry, airy, warm room is the only proper place to keep honey. But I have digressed.

When I first began to have honey I kept it in a pantry on shelves, the pantry being near the kitchen stove. Here it always kept well, for the piles were not dense enough to exclude the warm, dry air from permeating the whole. Later, as larger crops were obtained, I kept it in a room on the north side of the house. Here the centre and back part of the pile "sweat" or deteriorated badly, and I began looking about for the cause. I soon found it in looking back over the old pantry, and visiting Mr. Bet-singer, who at that time kept his honey in a little outside house about 6 feet square, which was painted dark, and had on it a rusty tin roof, so as to "draw the heat," as it is termed. In putting the two together I built my present honey-room in my shop which I have often described in the bee-papers.

I had thought myself perfectly suited with this, until the past fall when we had many damp, foggy, rainy days in succession, during which the sun did not shine to warm up the room in the least, nor could the windows be raised to allow a circulation of air, only to make matters worse. Seeing that something must be done, as the honey was beginning to show signs of "sweating," I brought into use an oil-stove, and with it I soon had the room warmed to 90°, which made it all right again, except a few sections of honey near the bottom and sides of the room where there was a poor circulation of air.

There are some points greatly in favor of a honey room in a shop like mine, such as having all under the same roof, so that the work of storing, crating and preparing for market can all be conducted with little labor; but, on the whole, I think there are more points, considering the question in its fullest extent, in favor of the honey-house being a separate building, but only a few feet away from the shop or general work room; so that were I to build again, I would not have the honey-house connected with the shop on account of its lack of exposure to the rays of the sun, imperfect ventilation, etc. My ideas now of such a house for 100 colonies of bees, are as follows:

Within 4 feet of the shop or work-room, at the south side, and even with the west end, I would build a house 8x10 feet square, and 8 feet high. This I would cover with cove ceiling to be painted black or dark red. For a roof I would use ¾-inch lumber covered with sheet-iron, and painted at the joints to prevent leaking, but not painted elsewhere, for sheet-iron will get hot in the rays of the sun beyond paint of any color. Near the bottom and on the east, south and west sides I would have

small windows for ventilation, which should be kept open at all times when the mercury would rise above 90° inside. These are to be secured and made so as to be opened (by sliding) from the outside. On the south side and near the top, I would have an ordinary window for light, the upper part of which should revolve to let bees out, which may come in on the honey. The door should be on the north side to correspond with one in the south side of the work-room, and both floors of the two buildings should be on a level, with a plank walk connecting the two.

For the inside of the honey-house I would have two platforms, raised a foot or 18 inches from the floor, one on the west and one on the east side of the room, to pile the honey on and leave a passage-way from the door to the window, between them, for convenience in storing and manipulation. The platforms should be made of slats set up edgewise, about 2 or 3 inches apart, so as to admit air freely, and the fumes of burning sulphur, if such is required. Such slats should also form the support for the sides and ends to the piles of sections, the slats being set off 6 inches from the inside of the building, so as to allow a free circulation of air in every direction.

A honey-house fixed as above, together with an oil-stove, will give apiarists complete control of the matter of preserving and ripening honey to their satisfaction. The oil-stove I prefer is the "Adams & Westlake."

Borodino, © N. Y.

For the American Bee Journal.

Will Patents Protect Poor Inventors?

R. V. MEIGS.

On page 185, I find an article from Mr. J. E. Pond, of Massachusetts, which is full of splendid sentiment, yet which carries a false and somewhat dangerous idea, as I understand our American patent system—a branch of law which I have made a special study for years.

I refer to the idea that an inventor, if poor, and his device of ready manufacture, cannot protect his rights, but must become a victim to every one who would infringe his inventions. Such is not the case, and I very much regret that any such idea should have been put forth. We ask nothing better than a case in patent causes, in which a valid patent has been infringed, and that too from an inventor without one cent. It is true that the getting of the first decision in the United States courts is sometimes quite expensive, but after a patent has been thus sustained, all further prosecution and collection for infringements is, as a rule, quite easy and of little expense to the owner of the patent. The expenses fall much heavier upon the infringer, and his defeat is sure, and even the few rogues that are inclined to violate the just principles so well laid down by Mr. Pond, will soon, to their peril, learn better.

I will not take up valuable space with this somewhat out-of-place subject, so much as to go into any explanation, for I am sure that all who give the matter their best thoughts, on general principles will at once recognize that our Government has not left our honest inventors without protection because they may be poor, or their inventions relating to manufactures which are used in a small way by many persons.

The American patent system is among the cheapest in the world, as well as the best to protect, and the many very valuable inventions of poor but ingenious Americans, who have become rich through patenting them, and at the same time doubly enriched the world, attest the truth of the position taken in this article.

Detroit, © Mich.

[As there has been one article on each side of this question, let it end here. We do not wish to give space to further argue the matter.—Ed.]

Bees as Pest Carriers.

A correspondent in California has sent us an article from the *Riverside Press and Horticulturist*, asking that it be inserted in the AMERICAN BEE JOURNAL with comments. Here is the article:

I am ready to prove that the setting of fruit is not in the least dependent upon bees. I am a pioneer, and was engaged in buying and selling fruit in 1851. The orchards and vineyards about the Missions were as fruitful then as now, or have been since; yet no bee was seen in California until four or five years later. The first bees imported into California were brought by a Mr. Sheldon, who placed them in charge of B. F. Kennedy, of Santa Clara, and on returning across the bay, met his death on the ill-fated "Jenny Lind." These 2 colonies were soon under my charge. I transferred them into Langstroth hives, and sent them on their mission of usefulness.

Up to that time the orchards and vineyards never failed in their abundance of fruit. While the injury done by bees to raisins in the Santa Ana Valley has been great the past year, the injury to oranges has been greater. The bees carry the red scale from tree to tree. This scale is the most destructive and the most difficult to destroy of any that has visited the Santa Ana Valley. The young of this pest are almost too small to be visible to the naked eye. The wingless females are carried from tree to tree by the bees. Simple declarations without the evidence on which they are founded, are valueless. I will therefore give the facts which establish my proposition.

First, the manner and habit of the bee in gathering pollen makes it practicable to collect these microscopic mites with pollen and carry them from one tree to another. That

they do this, is evident from the fact that the lemon tree, which is always in bloom and covered with bees, is the first to be infected with the red scale.

Second, I planted a small orange orchard two years ago. They were taken from a nursery remote from any red scale, and appeared to be entirely free from that pest. Soon after they began to bloom, the scale appeared, while those trees that did not bloom at all were free from the pest. Hence, it is evident that the bees visiting the blossoms brought the scale. There has been a remarkable increase of this pest during the past season. Many orange groves have been dug up and burned solely on account of the damage of the red scale.

There is plenty of room in California, as yet, for both industries, but they cannot flourish together. Our valley was once a good sheep-pasture, but when it became evident that it was more valuable for fruit than for wool and mutton, the sheep had to leave. When it becomes evident that our soil and acreage are more valuable for another industry, horticulture will modestly and silently retire.—Hiram Hamilton, of Pomona.

Our California correspondent desired us to send it to Prof. Cook, of Agricultural College, Mich., and ask him to reply to it. We did so, and here is his reply:

"I am not prepared or disposed to contradict or call in question any of the statements of Mr. Hamilton, except the first one. In that he unquestionably makes a great error, and this one mistake invalidates all the rest. He says: 'I am ready to prove that the setting of fruit is not in the least dependent upon bees.' This statement is a serious error, although Mr. H. is not very blamable for making it. He says that previous to 1851, California had no bees, but the crops of fruit were as good as those secured since that time. This is very likely true; but does it warrant the other statement?"

There is no truth of science better established, than that bees are of great service in the fruiting of most of our plants, including our varieties of fruit trees. Often the bees are indispensable to a partial, not to say a full, crop. Let us see how Mr. H. erred in his conclusions:

It must be remembered that wild bees and other insects may and do fertilize the flowers just as well as bees if they visit the flowers. There are many such insects, especially in California where there is no rigorous winter to kill off the unprotected insects. Here in the North and East we must have bees for our plants that blossom early, as there are too few wild insects to accomplish the work. I have lived in California, and remember distinctly the swarms of insects—not bees—that I used to collect on the fruit-bloom. We see then that fruitage was possible in California before bees were introduced. But now there are acres of orchard where

there were rods or even feet then. So it does not follow that the bees are not necessary now. It may be that the wild insects would be entirely inadequate to the task, and that the bees are very necessary.

That bees may and do carry and spread the newly hatched bark or scale lice is certainly true. Yet this should not condemn the bees in the mind of the sensible man. If bees do not work on the bloom and fertilize the flowers, other insects must and will spread the pests. It is only whether it shall be bees or other insects. Again, these scale lice will be spread even though there are no bees, or even any insects at all aside from the wee lice themselves.

The apple-tree scale louse is a serious pest here; and spreads just as the orange scale lice, etc., do in California. But the small, active lice here hatch not till the bloom is all gone. Hence it must be wind and birds that scatter these pests of our orchards; and they would do the same in California. The wind in California blows so fiercely that it carries sand with so much force as to wear through window glass. Who shall say that it will not carry these minute lice even to a considerable distance?

Our California friends need the bees to insure full crops, and they must spray their trees with the kerosene and soap mixture, or some other efficient insecticide, or the scale lice will bring their orchards to naught.—A. J. COOK.

For the American Bee Journal.

Selling Dark Honey, etc.

H. O. KRUSCHKE.

I started in the spring with 30 colonies in good condition. The honey-flow was not as abundant as it would have been had we not had such unprecedented drouth and heat. What honey my bees did gather was dark, not one section of it being light honey. Basswood yielded nothing. I took off 1,000 one-pound sections, and 400 pounds of extracted honey, and increased my apiary to 72 colonies.

I began to sell the honey about the middle of August. I took some to the stores in Necedah, and received 12½ cents per section; they sold it out for 15 cents. That suited me better than trying to peddle it myself. I considered the price all it was worth, and more than I could expect to realize by shipping it to distant markets. But a "damper" was soon put on this price. Some of my neighbor bee-keepers in another town came some 15 miles through sand knee-deep, and then sold their honey on the streets at 10 cents per pound section; yes, even down to 3 for 25 cents. Their honey was fine and light-colored. Of course that stopped my sales, and I did not try to sell then.

The most of the customers preferred my dark honey to that nice white, remarking that mine was the best honey that they had seen that year;

thick, and a rich flavor, and that it tasted like honey! etc. So do not say that dark honey is not fit to put into the sections, or that it must be sold for wagon grease. No, it is just as nice as the whitest—you have only to find the customers who like honey; and do not run it down as regards quality, as so many bee-keepers do. I always say it is as good as any, and who will say that it is not?

My extracted honey I sold to families at 10 cents per pound, or 12 pounds for \$1. No one thought that the honey was not nice, or seemed to care about its being dark. Long before Christmas my honey was sold in a small town of not over 1,200 inhabitants. I could have sold as much more up to this time if I had had it.

I am satisfied with the result, and do not care to be instrumental in raising the price of honey. It can be done however, but of course not by "can't." "Can't" never has accomplished anything. If I owned all the honey in the county I could get what I asked for it, but perhaps I could not sell it all at a high price, but at better prices than are ruling now. But the question of having a right to do so must be left out altogether. I have a right to get all I can for anything which I produce, and have a right to combine with co-producers.

I do not want 25 cents per pound for honey. I can make a good living at 10 to 12 cents per pound, and let others live also. Those who cannot produce honey at these prices must look for something better. Bee-keeping is not a business to get rich at—at least not in a hurry. If riches are what you are after, seek elsewhere. But if your object is to enjoy life and health, and wish others to enjoy theirs, you can reach that goal at bee-keeping.

Deuster, ☉ Wis.

For the American Bee Journal.

Bees have the Sense of Hearing.

CEYLON NILES.

In reference to Mr. Fox's article on this subject, on page 201, I would like to give my experience. We should not jump at conclusions, "but prove them as we go." I have had 37 years' experience among bees, but I find that I can learn something new each year.

In June, 1869, I had a colony swarm and cluster on an apple tree. I hived it and placed the hive on the stand. In about 20 or 30 minutes I went to the hive and there was not a bee to be seen or heard. I rapped on the hive and found that the bees were there. I thought something was wrong, so I sat down in front of the hive and watched. In about 15 or 20 minutes a bee came and made a circuit of about 8 feet above the hive, and made a humming noise something like a drone. The bees inside the hive heard the sound and answered it. The bee kept coming nearer and nearer as it circled around the hive, till it rested on the alighting-board, then two or three bees came and met

it. The bee went into the hive, and was in there just a moment when all the bees came out of the hive and went to the woods.

In July, 1873, I had another colony quiet down in the same manner after I had hived it. I stopped the entrance so that no bees could go in or out, but left it so that they could have plenty of air. I watched it, but there was not a sound to be heard inside the hive. In about half an hour a bee came and made a circuit around the hive, making a humming sound, and the bees answered it. When the bee reached the alighting-board, I killed it. In a short time the bees quieted down. In about 15 minutes there came another bee and made the same sound, and the bee answered it. I killed this bee also. After awhile the bees quieted down as before, when in about half an hour back came three bees, and I killed them as I did the others. I watched them the remainder of the afternoon, and no more bees came back. About 6 o'clock I opened the entrance of the hive, when the bees came and clustered on the outside of the hive, but quieted after awhile. The next day the bees went to work all right.

The same week I had another colony act in nearly the same manner. I stopped the entrance and watched as before; eight bees came and I killed them. About 6 o'clock I opened the entrance, and the bees clustered on the outside of the hive. The next day they went to work all right.

I have had 2 or 3 colonies act in the same way since. This convinces me that bees can hear. I would say to those that let their bees swarm, if they do not want them to go to the woods, to try this plan and report through the BEE JOURNAL, Schuyler's Lake, ☉ N. Y.

Read at the Albany, N. Y., Convention.

The Depression in the Honey Market.

LYMAN C. ROOT.

At the last meeting of this association, held at Rochester, resolutions were adopted relative to the necessity of developing our honey market, and I was appointed as a committee of one to take such action, and make such investigations as would be likely to secure progress in this direction. These resolutions were most comprehensive, and indicated very distinctly a great work which might be accomplished. There are many who would be glad to see these results reached, but they are not induced to unite in the work. No work of this importance can be accomplished without united effort.

I shall endeavor to show some of the causes of the depressed condition of our honey market, and suggest some of the remedies. I have spent much time during the year in very close observation. Had the necessary financial aid been at hand, much might have been accomplished which would have resulted very beneficially. I should have visited the different

markets of our State, and made thorough investigations, offered premiums for the best and most attractive honey-labels, and would have offered special inducements for the best and most concise leaflet for general distribution with each package of honey sold. I should have experimented thoroughly in an endeavor to evaporate honey, until the entire moisture it contained was removed, so that we might secure pure evaporated honey in drops of suitable size to be sold as confectionery.

I believe that the time of one person qualified for the work, might, by the united assistance of the bee-keepers of the State, be profitably employed during the entire year, in placing honey as an article of food and medicine, before the public as its merits may honestly demand.

It would require more time than could be well given to one essay, to trace back through the past, the various causes which have combined to produce this depression under which we are at present laboring. Until about the year 1870, honey was produced almost exclusively in boxes holding from 2 to 8 combs, and weighing from 5 to 12 pounds. These boxes were made with wood top and bottom, 4 corner posts, and 4 glass sides. When they were well filled and capped, and all made very tight by the bees sealing all openings with propolis, they were in much better shape to pass through the hands of the dealer and into the hands of the consumer, than much of the honey produced by the later methods. But here arose objections. In removing the first glass and comb, and while using the remainder of the honey, the consumer was much annoyed, and the leaky package was often a great nuisance.

To do away with these objections as well as to secure other advantages, the single-comb section came into use. Consumers seemed willing to pay for glass on each section, for the sake of the advantages gained. Unquestionably this practice has to quite a degree diminished the amount of honey consumed, particularly those of moderate means. I have been an advocate of glassing sections, from the fact that the emergency seemed to demand it, and I do not yet see how honey can be sold in single sections, properly protected, without too great an expense to the producer, unless it is glassed.

About the time the single-comb section came generally into use, bee-keepers became very enthusiastic over the process of throwing honey from the combs by centrifugal force, and many other new methods, which resulted in great effort to produce large amounts of honey. This was carried to such an extreme, that greater effort was given to the quantity to be secured than to the quality. In the great haste to secure large yields, much of it was hurried from the combs before all the cells were capped. In glassing sections, many combs were started from the side of the boxes, and in many ways it has been put up in packages that have

leaked and were very disagreeable to handle. All of these things have had a tendency to lessen the demand. The reduction in the price of extracted honey has come largely from the fact that it has been subject to adulteration. This was the case, as might have been expected, when prices ranged high; but as they are becoming reduced, adulteration is discontinued.

Unquestionably, the greatest cause of the late depression in the honey market is the general depression of the times. The masses have, from necessity, been compelled to economize; this would prevent the use of comb honey to a great degree. It is not bee-keepers alone who have been affected by these depressing times.

That honey has not been more largely used, is not to be attributed to its undesirability as an article of food, for that is established beyond dispute. The effort in the future must be to not only lessen the cost of production, but at the same time furnish it in such perfect shape as to satisfy all the demands of both the dealer and consumer. In connection with this, the point must not be lost sight of that the general public still needs a good deal of enlightenment as to the intrinsic value of honey for the many purposes for which it may be used.

The practice of sending of products so generally to the city markets, and neglecting our home markets, has resulted greatly to our disadvantage, especially as they are at present managed, our honey being handled in the large markets by those who are not versed in all of the phases of bee-keeping. It has been impossible for them to build as firm a market as could be done by practical bee-keepers themselves.

One serious lack in our convention work has arisen from the failure to induce the wholesale and retail dealers in honey to be present at one session at least, of our meetings, at which time the subject of marketing our products should be discussed. Inducements should also be offered to secure a larger attendance of those who represent the consumers, which should be of mutual advantage. Dealers and producers should also be induced to present at these meetings samples of honey in the most desirable form for the best interest of the market.

I would recommend that all associations be urged to adopt these suggestions, and strive to correct this omission. There is greater need of earnest application in this direction than in any other branch of our calling, and too much thorough work cannot be bestowed upon it.

Bee-keepers must have in mind the fact, that to overcome these prejudices, and to build up a firm honey market, every effort must be made to have all honey placed upon the market in such packages as to prevent in every way possible, the honey from escaping and soiling other packages, or to in any way make it disagreeable to handle. Liquid honey should only be placed on the grocers' shelves in sealed packages. Every precaution

should be taken to have every comb in the sections perfectly capped, and firmly secured to the sides, so that it may be handled with the least chance of injury. In producing our honey, we must have in mind all of the necessities of the producer, the dealer, and the consumer.

Stamford, 9 Conn.

For the American Bee Journal.

Alfalfa as a Honey-Plant.

A. J. FOSS.

The following article from the San Francisco Chronicle may be of some interest to the readers of the AMERICAN BEE JOURNAL. San Diego county does not produce alfalfa honey, as alfalfa is not raised in sufficient quantities, but I have often seen it mentioned as furnishing honey in the counties north of this. The prospect for honey in this county is very poor indeed just at the present time, but our bees are strong, and with a few good showers we will have part of a crop; in one week more we will have drones flying. Here is the article referred to:

"The bee-keepers of Colorado recently held a State convention at Denver, in which many valuable points were brought out concerning this industry. Among other things, it seems that the most successful apiarists of Colorado are women, and the convention was largely composed of them. There was a good exhibit of honey and bee-keeping appliances, and much attention was attracted by a display of comb honey made entirely from alfalfa. It was snow white and of remarkably fine flavor. It is said that since the general introduction of alfalfa in Colorado, the keeping of bees has become a very profitable business, that plant furnishing an abundance of forage for the little insects. But it has not reached the development there that it has in California, for an apiary of 150 colonies is said to be the largest in the State, while here they frequently range from 200 to 500 colonies on a single ranch.

"It is evident from the experience of the last four years, that bee-keeping in California has received a serious set-back—that is, so far as relates to the production of extracted honey. Comb honey still sells at a price which pays a very fair profit; but it is useless to disguise the fact that at the price obtained for two or three years, the producer of extracted honey has had a balance on the wrong side of his ledger at the close of each season. Owing to the fact that much has been put upon the market in an unripened condition, it is very difficult to persuade people to adopt it as an every day, staple article of food.

"The purchaser of extracted honey at retail has no protection against the wiles of the adulterator. But with comb honey it is different. Not all the arts of the sophisticator have yet been equal to the task of producing an imitation of the wonderful work of the bee in the manufacture of comb

honey. It would seem to be the part of wisdom, then, for the bee-keepers to turn their attention more to the production of comb honey, instead of extracted honey.

"In this connection, too, it may be noted that in order to get people to become habitual consumers of honey, it must be put up in small and attractive packages and sold at a price which puts it within the reach of all, so that it may be regarded as a staple rather than a luxury, as is now the case. The bee-keepers, too, must adopt some means for bringing the excellence of their product more directly to the attention of consumers. Notwithstanding the enormous product of the apiaries of this State, it is seldom that honey is seen exposed for sale in the grocery stores at retail, and when it is offered it is generally at a price about 200 per cent. or more higher than that received by the producer. Comb honey can be sold at a very moderate price, and still leave a profit to all who handle it, but some means must be taken to induce people to become larger consumers of it, if it is hoped to remedy the existing state of affairs.

"Another reason that makes the keeping of bees a precarious business, is the liability to an almost total failure of the crop nearly every other year, owing to the lack either of a sufficiency of wild bloom or a deficiency of the supply of nectar in the blossoms. The experience of the Colorado bee-keepers in this direction seems to offer a hint, and if it is true that alfalfa will produce so good a quality of comb honey, then it will be a comparatively easy matter for California apiarists to render themselves entirely independent of the caprices of the seasons, and give them a certainty of producing a good crop every year."

De Luz, Calif., March 26, 1887.

For the American Bee Journal.

Have Bees the Sense of Hearing?

D. BRIMMER.

In discussing this subject I have no object only to arrive as nearly as possible at the truth, for I have been a lover of the truth always, and while I am aware how difficult it is to come at it, so as to satisfy my own mind, much less those who are skeptical.

On page 201, Mr. Fox seems to take a different view from what I did in my article on page 121. He would have us believe that bees are wholly guided by the sense of sight, and labors to prove that the different sounds emitted are wholly from the vibration of their wings. Now, I would ask, can their wings vibrate when an ugly bee gets into a person's hair, or under his coat-collar, squealing and grunting like a young pig? I think it begins to resemble the cylinder of a thresher at a high rate of speed; and then, when bees get in a pinch, how they cry for quarters. Is that vibration?

With regard to a few bees leading a swarm to a tree previously selected,

is a fact so well established that I am surprised to find a bee-keeper who doubts it. I have been aware of it from my youth up, and I find it well demonstrated in my experience. Would Mr. Fox have us believe that they go in a body to search for a tree in the forest? If they do they have good eye-sight; for more than 40 years ago I had 2 swarms come out and unite, and I hived them, but I saw they were restless, and the next day they came out and started toward a piece of woodland, up a hill, and as they were not going very fast I followed and saw them go into a large oak out of sight of my apiary, more than a mile from the place of starting. Is it to be supposed that they could all see the hole in that tree before starting? If not, then the leaders must have had flags to beckon them on, if deaf.

When we compare a swarm of bees to a drove of sheep or covey of prairie chicks, we stray from the mark, for the same law that governs the animal race does not come under that of the insect. Mr. Fox is willing to accord to sheep a leadership, but does not tell us how the leaders attract attention; it is by the bleating of the foremost.

As to stopping absconding swarms, I would say that I was as skeptical as any one once, and laughed at the idea of stopping bees with a noise to confuse them, and by letting them have their own way I have lost many good swarms that I might have saved. But give me a good bell, the size a milk-man carries, and if I can run fast enough to a little ahead of them, I can stop 9 out of every 10 swarms. I have stopped lots of them since trying the plan.

I would like to ask Mr. Fox if he never saw a young queen in the act of piping? I have more than once while holding the comb on which she was, and I know it was not caused by vibration. It is well known that old queens can be scented by the bees, but can they do it with a virgin queen? I think not. Now if there is no evidence that bees can hear, then I am no judge.

Hoosick, N. Y.

For the American Bee Journal.

Quietude of Bees in Winter.

9—JOHN C. GILLILAND, (25-23.)

Mr. G. W. Demaree denies, on page 151, that bees ever resort to exercise to raise or keep up the temperature in the hive in winter; and he thinks the theory of exercise to counteract falling temperature was invented to bolster up the "pollen theory." The theory may have been invented for that purpose, but the fact existed long before the "pollen theory" was evolved.

The statements here given I know from personal observation in this county only, never having examined bees in other places in winter. In January, 1885, the hive and cloth covers were blown off one of my colo-

nies just after dark, and remained so until the next morning about 7 o'clock, leaving the bees exposed about 12 hours, with no covering except the clouds, and the mercury was at zero when I discovered their condition. About half an inch of snow had fallen in the early night and drifted in on them. They were roaring so that I heard them several feet away from the hive, and the bees on the outside of the cluster were continually going into it and others coming out. I both saw and heard these bees exercise to keep warm. In a few days the temperature rose up to 40° at noon, when they were quiet again, and there was a just perceptible hum, on placing the ear at the entrance. I know they were exposed all night, as it ceased to snow soon after dark, and the cover and cloth were both covered with snow.

I winter my bees on the summer stands, and know nothing about cellar wintering, by experience. I have wintered colonies packed with the enameled-cloth propolized down tight so there could be no upward ventilation, and others packed and with upward ventilation; also colonies unpacked in $\frac{3}{4}$ -inch single-walled hives, with and without upward ventilation. The temperature the most of the winters was as low as 20° below zero, and has been as low as 27½° below.

I visited the apiary at different hours in the daytime, and at night when the temperature was from 32° above zero to 24° below, and instead of the "oppressive stillness" the quietness (?) could be plainly heard, the hum or roar increasing as the mercury lowers until at 20° below zero, or lower; it can be distinctly heard 10 feet from a hive. This is kept up day and night with no cessation that I have been able to discover, until the temperature is rising, decreasing as it does so until it reaches about 40°, when there is just a perceptible hum by placing the ear at the entrance and listening closely. There is a very slight, if any, difference in the roar of the differently prepared colonies.

In the winter of 1880-81 this roar continued for over two months. In October, when there is a frosty morning with the temperature 10° below freezing, they will roar lively, and quiet down in an hour or two when the sun warms things up. With me, bees are most quiet at 40°. A higher temperature causes them to leave the cluster, and fly out, and as the temperature becomes lower they cluster more compactly, and the noise grows louder the lower it gets. Of course they do not leave the cluster to exercise, as that would defeat the object they are trying to accomplish.

This hum, when bees are clustered, is made by the true voice, as shown by Mr. Frank Cheshire, and certainly requires respiration. Therefore, to increase the hum they must increase respiration, and that is exercise. Possibly they are putting in the time, when too cold for anything else, exercising their vocal organs in getting ready for a grand chorus when spring comes. The colder the air, the more

oxygen in a given space, and this added to the increased volume taken in by increased respiration, furnishes the fuel to raise the temperature. The bees do this because instinct so teaches them.

Mr. J. W. Bayard's article is very nearly correct, and certainly so for my locality, as to the colony never ceasing their hum until dead.

Mr. Demaree is less than one degree south of this place, and it seems strange that such little distance should so change the actions of bees. It may be a strange phenomenon and an amazing philosophy that bees do this, but it is a fact here, at least. It is another fact showing that location changes nearly all rules about bees, and that each one must learn to adopt the management that suits his own location.

Bloomfield, 9 Ind.

For the American Bee Journal.

Dairymen and Bee-Keepers.

JAS. E. TODD.

I prepared the following address which was read at the Farmers' and Dairymen's Association at Oneonta, N. Y., on Feb. 15, 1887, and would like to see it in the AMERICAN BEE JOURNAL. It is as follows:

It is well, perhaps, to first notice the fact that the interest of both bee-men and dairymen in many respects is identical. I will present a few observations which I have made at different times while keeping bees, not having been without them for over 30 years. We are literally living in "a land flowing with milk and honey," and inasmuch as the production of each of the best quality and in the largest quantity depends more or less upon the other, it is well that we study the underlying principles which tend most surely to advance them. The food question, then, would seem to be of the first importance.

It is pretty generally admitted that when our pastures and meadows are well covered with a heavy growth of clover, that they are in a first-rate condition regarding general fertility and milk-producing abilities. I have been experimenting for the last few years with Alsike clover, and I find it to be the very best of milk and honey producing food for cows and bees. The way bees help to increase its growth is by more perfectly fertilizing its bloom.

Alsike clover is a hybrid or cross between the small white clover and the pea-vine clover. It grows tall like the pea-vine, but unlike it, it grows a small, fine stalk, curing when cut for hay in one-half the time and sun required to dry the coarser clover. Its blossoms are the same size as the white clover, with white color except the outer edge which is pink, presenting a most beautiful appearance. Having a small blossom, its entire sweets are easily reached by the bees, and so attracts large numbers of them, thus causing its bloom to be most thoroughly fertilized by the dust

of other bloom. Along in June, about the time that this occurs in this latitude, it may be observed that the clover head and entire stalk will begin to grow and swell rapidly, and will soon load with seed, and in good soil it will yield immense crops of hay or seed. The seed being very fine, it requires about two quarts, with one quart of the other seed, and eight or ten quarts of timothy and red-top seed mixed, per acre.

The Alsike and red-top delight in a damp, rich soil. If bees are so abundant as to thoroughly fertilize the clover bloom while in this blossom-opening stage, it would be largely for the interest of the dairyman to sow a light coating of plaster over his meadow and pastures some time in May, if his soil is of a clayey or retentive nature. But if the soil is of a sandy composition, or if bees are not abundant to fertilize the bloom, perhaps the plaster would do less good. It is also for the interest of both bee-keeper and dairyman to sow and raise large fields of buckwheat, and buy less meal feed for stock.

A good yield of grain, as well as straw, is almost certain where the honey-bees are sufficiently numerous to thoroughly fertilize the bloom, if the soil has been made sufficiently strong to produce the grain. We often hear men say that the sun has blasted their buckwheat, whereas the fact is that the soil or care was too weak to produce more than a weak growth of straw, and was exhausted at the very time that the grain began to form, or honey-bees were too few to fertilize the bloom. A buckwheat crop may be made to pay simply for the flour, and the coarser part of bran, which is an excellent milk-producing food, be obtained without cost. Buckwheat straw rightly cured and cared-for, with a little grain, and fed without grinding, is very good winter food for young stock. Buckwheat is also the best of egg-producing foods for fowls, and chicks will eat and do well on it while very young.

While it is a hard and laborious study to learn telegraphy or engineering, it is little less so to become an expert at bee-culture; and here also is to be found the secret of so many failures. There seems to be an impression among men that about all one wants is a few bees and the hiving of the swarms, and a little later on, the carrying in of tons of honey. The getting of a few bees is all right, but the watching, care and labor is much more than was expected. The knowing how to do, and the doing of the right thing at the right time, are the inexorable terms of success.

If the bee-keeper sees an attempt being made by a powerful colony to rob a weaker one, help to the weaker one must be immediate, or it is of no avail at all; for as soon as the weaker one is overcome its queen is killed, and the workers compelled to turn in and help carry their own honey with their victors, home to the hive of their assailants. Neither do they seem to grieve over the transfer of allegiance, for the very next day

they will go to work as cheerfully carrying in honey from the field to their victor's hive as they had been doing in their own; but they do not yield to this without a terrible struggle. Often more than half the inhabitants of the hive will fiercely give up their lives and lie dead before their hives on the field of battle in defense of their honey, their queen and young, all of which they know will perish if they fail. The robbing difficulty can be greatly reduced, if not entirely overcome, by keeping all colonies strong, and sizing the entrance to that of the colony, and by exercising proper care while putting on or taking off honey, and otherwise opening the hives and handling the bees or honey. It is also almost equally important to do all things pertaining to bee-culture with nearly as much promptness as in the case of robbing.

There is also a good part of the year that bees need little or no care at all. The first thing to be done after getting a colony of bees, is to get them into a movable-frame hive, if they are not already in one, as soon as warm weather comes in the spring, and circumstances will permit. The choosing of the hive, too, which must be left to the person expecting to use it, very much like the choosing of a mowing-machine, is to be decided. I believe a low frame hive is preferable, and I use one, which I call the honey-chest, and winters bees safely on the summer stands, bringing forth strong colonies to take hold of the first spring bloom with vigor. The best facing for the hive is to the southwest, if there is any difference, but the main thing is to have the inside of the hive and bees right, and then all will be right.

Bee-keepers should not allow their honey to go upon the market until well assorted, keeping the white and dark separate, with prices according to quality. It is as difficult for bee-keepers as dairyman, or other producers, to agree on price or any general course of action. But they clearly should all determine to produce none for sale but the very best quality, at whatever cost of quantity. This the consumers themselves will not object to, and with almost all articles produced on the farm the same rules should be observed.

About the best course of late years for bee-keepers, is to take off the surplus honey before the dark, fall honey comes in, as it is so cheap, leaving the dark for the bees to winter on, if well sealed over, but if open it should be extracted, as it will sour in the hive and kill the bees before spring. This course will leave us only the white, best honey. Then we should see, as much as possible, that the honey is sent to market through and into hands not interested in getting prices down or damaging them.

Unadilla, © N. Y.

The Convention History of America with a full report of the proceedings of the Detroit and Indianapolis conventions, and the AMERICAN BEE JOURNAL for one year, will be clubbed for \$1.25.

Local Convention Directory.

1887. *Time and place of Meeting.*
 Apr. 26.—Central Michigan, at Lansing, Mich.
 J. Ashworth, Pres., Lansing, Mich.
 Apr. 26.—Des Moines Co., at Burlington, Iowa.
 John Nau, Sec., Middletown, Iowa.
 May 4, 5.—Texas State, at McKinney, Tex.
 B. F. Carroll, Sec., Dresden, Tex.
 May 5.—Sheboygan County, at Hingham, Wis.
 Mattie B. Thomas, Sec., Sheboygan Falls, Wis.
 May 10.—Cortland Union, at Cortland, N. Y.
 D. F. Shattuck, Sec., Homer, N. Y.
 May 24.—N. W. Ills. & S. W. Wis., at Rockton, Ills.
 D. A. Fuller, Sec., Cherry Valley, Ills.
 May 29.—West Lake Shore Central, at Kiel, Wis.
 Ferd Zastrow, Sec., Millhome, Wis.
 Dec. —. Michigan State, at East Saginaw, Mich.
 H. D. Cutting, Sec., Clinton, Mich.

NOTE In order to have this table complete, Secretaries are requested to forward full particulars of time and place of future meetings.—ED.

SELECTIONS FROM OUR LETTER BOX

Swarming and Gathering Honey.

—Peter Morelein, Brussels, \circ Ills., on April 7, 1887, says:

My bees commenced swarming to-day. The honey comes in rapidly from willow and wild plum. The weather is very hot and dry at the present time, the mercury being at 86° in the shade. Bees are building up finely.

Bees Wintered Well.—Ferd. Zastrow, Millhome, \circ Wis., on April 11, 1887, says:

Bees have wintered in the finest condition, both in the cellar and outdoors. Our bee-keepers' association has done remarkably well by spreading the knowledge of bee-keeping among its members, for the one year that it has existed; also the AMERICAN BEE JOURNAL has been an invaluable assistant to me; every bee-keeper ought to read it.

Deep Snow in Vermont.—A. P. Fletcher, Ludlow, \circ Vt., on April 8, 1887, says:

The snow here on the level ground is still over 3 feet deep. An apiary of bees in Manum hives is only visible above the snow, and those hives stand 3 feet and 6 inches high. One can just see the tops of the hives. The banks made by shoveling the snow from the walks in some instances are now nearly 10 feet deep; they have been deeper.

Bees Wintered Poorly.—E. N. Fisher, Ludlow, \circ Mass., on April 6, 1887, writes:

Bees have wintered poorly in this locality. I had 30 colonies last fall, and I now have but 15 left. Some were on the summer stands, but most of them were in the cellar, the temperature ranging from 35° to 40° . During

a dry spell the last season the bees gathered a substance from the pond-lily leaves, dark colored and bitter, which gave them a diarrhea, and caused the death of most of my old colonies. We have had but two days this spring during which bees could fly, and there are quite a number of colonies in the neighborhood that are still in the cellar. I do not think we shall have many early swarms this season.

Long Winter Confinement.—C. F. Smith, Cheboygan, δ Mich., on April 11, 1887, says:

My 15 colonies of bees have wintered under straw absorbents in a damp cellar at 38° , for 5 months and 10 days. Above the cellar 3 healthy children have played continually. The bees have been taken out, and are in apparently good condition.

Wintering Problem Solved.—A. D. Stocking, Cedar Branch, δ Ind., on April 9, 1887, writes:

My 16 colonies of bees are all right, and are bringing in pollen from the willows. All colonies seem to be strong. They were wintered on the summer stands, the same as I have always wintered my bees. With me the problem of wintering bees is solved, and if I can have the three conditions, viz: the hive full of bees, plenty of good stores, and keep them dry, I would not give 10 cents per colony to have them insured to winter well.

Bees Enjoying Themselves.—John K. Rich, Cato, \odot N. Y., on April 11, 1887, writes:

I had 18 colonies of bees last fall, 11 of which I put into the cellar the first week in November, with the temperature at 38° to 42° . I put them out on April 8, with a loss of 1 colony. Of the 7 colonies wintered on the summer stands there was a loss of 2 in chaff hives. I used 10 of the Bet-singer honey-cases with wire-cloth separators; there was no propolis, and they were much more easily handled than wide frames. I shall use them exclusively the coming season. The temperature now is 75° , and the bees seem to enjoy it.

Singular Winter—Bees all Right.—W. Addenbrooke, North Prairie, \circ Wis., on April 11, 1887, writes:

I put 130 colonies into the cellar on Nov. 24, 1886, and removed them to the summer stands on March 12, 1887. All are alive and in good condition. A few are now weak, and will be united soon, if the weather keeps as warm as it is now. On March 26, at 8 p.m., it commenced to snow, and snow fell until 4 p.m. on March 27. It drifted some, and was the heaviest snow-fall of the winter. On March 28 and 29 we had zero weather, and on April 4, we had a regular blizzard

with snow all day; since then we have had good weather. Yesterday and to-day it was 75° in the shade. Bees gathered natural pollen for the first time to-day. I banked up all my colonies with snow, put good, warm quilts on top of the frames underneath the honey-boards, kept the ground bare of snow in front of the hives, and the colonies are in good condition, with plenty of brood and young bees hatching out. This winter has been rather singular for Wisconsin—so many severe changes in a few hours.

Where is it Found?—Dr. C. C. Miller, Marengo, δ Ills., writes:

On page 218, in the address of Rev. W. F. Clarke, occurs the following statement: "It is proposed by some to pass a law securing to the first comer as a bee-keeper into a neighborhood, the exclusive ownership of the bee-forage within certain limits." Will Mr. Clarke kindly give the names of some who have made such a proposition, and also the place, if any, where it has been mentioned in any of the bee-papers?

Yet Snow-Bound.—J. B. Mason, Mechanic Falls, δ Maine, on April 9, 1887, writes:

The season here is away behind. We are yet snow-bound, the snow to-day being 3 feet deep in the woods, with plenty of drifts 10 feet deep. Last season, five days later than this, the bees were bringing in pollen.

[Here in the West, the season is quite up to time, or, in fact, it is earlier than common. Bees around the suburbs of Chicago have been bringing in pollen for ten days.—ED.]

Young Carniolans Flying.—Henry P. Faucett, Dilworthtown, \circ Pa., on April 9, 1887, says:

Bees have wintered well so far. I lost 2 out of 50; they had a good flight to-day. In one of my Carniolan colonies drones and young bees were flying out. These drones were reared this spring. Bees gathered the first pollen on March 21, from swamp-cabbage.

Good Prospects for 1887.—G. L. Rankins, Weston, \circ Ky., on April 11, 1887, writes:

Last fall I prepared 14 colonies of bees for winter on the summer stands; I now have 13 good, strong colonies and one weak one. They are working finely now, gathering honey from the peach, cherry and plum bloom. Apple trees are beginning to bloom, and everything looks as if we will have an early spring, and plenty of white clover. If so, we will have a fine honey crop. I am going to work all my bees for comb honey, as it sells best in this part of the country. I sold all I had last year at 12 and 15 cents per pound.



Issued every Wednesday by
THOMAS G. NEWMAN & SON,
 PROPRIETORS,
 923 & 925 WEST MADISON ST., CHICAGO, ILL.
 At One Dollar a Year.

ALFRED H. NEWMAN,
 BUSINESS MANAGER.

Special Notices.

To Correspondents.—It would save us much trouble, if all would be particular to give their P. O. address and name, when writing to this office. We have several letters (some inclosing money) that have no name; many others having no Post-Office, County or State. Also, if you live near one post-office and get your mail at another, be sure to give the address we have on our list.

Money Orders can now be obtained at the Post Offices at reduced rates. Five dollars and under costs now only 5 cents. As these are absolutely safe, it will pay to get them instead of the Postal Notes which are payable to any one who presents them, and are in no way safe.

Preserve your Papers for reference. If you have no **BINDER** we will mail you one for 60 cents, or you can have one **FREE** if you will send us 3 new yearly subscriptions for the BEE JOURNAL.

Colored Posters for putting up over honey exhibits at Fairs are quite attractive, as well as useful. We have prepared some for the BEE JOURNAL, and will send two or more free of cost to any one who will use them, and try to get up a club.

We will Present Webster's Dictionary (pocket edition), and send it by mail, postpaid, for two subscribers with \$2. It is always useful to have a dictionary at hand to decide as to the spelling of words, and to determine their meaning.

One Dollar invested for the weekly visits of the AMERICAN BEE JOURNAL for a year, will richly repay every apiarist in America.

Red Labels for one-pound pails of honey, size 3x4½ inches.—We have now gotten up a lot of these Labels, and can supply them at the following prices: 100 for \$1.00; 250 for \$1.50; 500 for \$2.00; 1,000 for \$3.00; all with name and address of apiarist printed on them—by mail, postpaid.

Home Market for Honey.

To create Honey Markets in every village, town and city, wide-awake honey producers should get the Leaflets "Why Eat Honey" (only 50 cents per 100), or else the pamphlets on "Honey as Food and Medicine," and scatter them plentifully, and the result will be a DEMAND for all of their crops at remunerative prices. "Honey as Food and Medicine" are sold at the following prices:

Single copy, 5 cts.; per doz., 40 cts.; per hundred, \$2.50. Five hundred will be sent postpaid for \$10.00; or 1,000 for \$15.00. On orders of 100 or more, we will print, if desired, on the cover-page, "Presented by," etc. (giving the name and address of the bee-keeper who scatters them).

To give away a copy of "Honey as Food and Medicine" to every one who buys a package of honey, will sell lots of it.

System and Success.

All who intend to be systematic in their work in the apiary, should get a copy of the Apiary Register and commence to use it. the prices are reduced, as follows:

For 50 colonies (120 pages).....\$1 00
 " 100 colonies (220 pages)..... 1 25
 " 200 colonies (420 pages)..... 1 50

The larger ones can be used for a few colonies, give room for an increase of numbers, and still keep the record all together in one book, and are therefore the most desirable.

The Production of Comb Honey, as practiced and advised by W. Z. Hutchinson, can be obtained at this office, for 25 cts.

Sample Copies of the BEE JOURNAL will be sent FREE upon application. Any one intending to get up a club can have sample copies sent to the persons they desire to interview, by sending the names to this office, or we will send them all to the agent.

As there is Another firm in Chicago by the name of "Newman & Son," we wish our correspondents would write "American Bee Journal" on the envelope when writing to this office. Several letters of ours have already gone to the other firm (a commission house), causing vexatious delay and trouble.

Do you Want a Farm Account Book? We have a few left, and make you a very tempting offer. It contains 106 pages, is printed on writing paper, ruled and bound, and the price is \$3. We will club it and the Weekly BEE JOURNAL for a year and give you both for \$2. If you want it sent by mail, add 20 cents for postage.

Simmins' Non-Swarming System is the title of a new English bee-book. The author claims that it will inaugurate a "new era in modern bee-keeping," and states that "it is based upon purely natural principles, and is the only system that can ever be relied upon, because no other condition exists in the economy of the hive that can be applied to bring about the desired result—a total absence of any desire to swarm." It contains 64 pages; is well printed and illustrated. Price 50 cents. It can now be obtained at this office.

OUR CLUBBING LIST.

We supply the American Bee Journal one year, and any of the following publications, at the prices quoted in the last column of figures. The first column gives the regular price of both. All postage prepaid.

	Price of both. Club
The American Bee Journal	1 00..
and Gleanings in Bee-Culture.....	2 00.. 1 75
Bee-Keepers' Magazine.....	1 25.. 1 25
Bee-Keepers' Guide.....	1 50.. 1 40
The Apiculturist	2 00.. 1 70
Canadian Bee Journal.....	2 00.. 1 75
Rays of Light.....	1 50.. 1 35
The 7 above-named papers	5 25.. 4 50
and Cook's Manual.....	2 25.. 2 00
Bees and Honey (Newman).....	2 00.. 1 75
Binder for Am. Bee Journal.....	1 60.. 1 50
Dzierzon's Bee-Book (cloth).....	3 00.. 2 00
Root's A B C of Bee-Culture.....	2 25.. 2 10
Farmer's Account Book.....	4 00.. 2 00
Guide and Hand-Book.....	1 50.. 1 30
Heddon's book, "Success,".....	1 50.. 1 40
A Year Among the Bees.....	1 75.. 1 50

One yearly subscription for the AMERICAN BEE JOURNAL must be ordered with each paper or book, in order to take advantage of the prices named in the last column.

E. Duhean Sniffen, Advertising Agent, 3 Park Row, New York, inserts advertisements in all first-class Newspapers and Magazines with more promptness and at lower prices than can be obtained elsewhere. He gives special attention to writing and setting up advertisements in the most attractive manner, and guarantees entire satisfaction. In all his dealings, he is honorable and prompt. Send for his Catalogue of first-class advertising mediums. Mailed free. 52A40t

Yucca Brushes are employed for removing bees from the combs. They are a soft, vegetable fiber, and do not irritate the bees. As each separate fiber extends the whole length of the handle as well as the brush, they are almost indestructible. When they become sticky with honey, they can be washed, and when dry, are as good as ever. The low price at which they are sold, enables any bee-keeper to have six or more of them, so as to always have one handy. We can supply them at 5 cents each, or 50 cents a dozen; if sent by mail, add 1 cent each for postage

When Renewing your subscription please try to get your neighbor who keeps bees to join with you in taking the BEE JOURNAL. It is now so cheap that no one can afford to do without it. We will present a **Binder** for the BEE JOURNAL to any one sending us three subscriptions—with \$3.00—direct to this office. It will pay any one to devote a few hours, to get subscribers.

By Using the Binder made expressly for this BEE JOURNAL, all can have them bound and ready for examination every day in the year. We have reduced the price to 60 cents, postpaid. Subscription for one year and the binder for \$1.50.

Dr. Miller's Book, "A Year Among the Bees," and the BEE JOURNAL for one year, we will club for \$1.50.

Honey and Beeswax Market.

The following are our very latest quotations for honey and beeswax:

CHICAGO.

HONEY.—Sellers ask from 7 to 10 cts. for anything off in comb honey; this includes dark undesirable and crooked combs, and 2-pound sections. Good 1-lb. sections, 10¢@12¢; choice, 12¢@13¢.—Sales have been larger this month than at any time since November, and prices average a little lower for combs than the above.

BEESWAX.—25¢. R. A. BURNETT, 161 South Water St. Mar. 28.

DETROIT.

HONEY.—Best white comb, 11¢@12¢. Market is improving.

BEESWAX.—23¢. M. H. HUNT, Bell Branch, Mich. Apr. 11.

SAN FRANCISCO.

HONEY.—We quote: Extracted, white, 4¢@4½¢ cts. Comb, white, 7¢@8¢. Market firm.

BEESWAX.—Scarce at 22¢@23¢. Apr. 4. SCHACHT & LEMCKE, 122-124 Davis St.

SAN FRANCISCO.

HONEY.—We quote: Old comb, extra white, 12¢@14¢; dark, 8¢@11¢. Extracted, amber and candied, 3¢@4¢; extra white, 4¢@5¢. Outlook is gloomy, as rain is needed badly.

BEESWAX.—Scarce at 22¢@23¢. Apr. 5. O. B. SMITH & CO., 423 Front St.

BOSTON.

HONEY.—1-lb. packages of white clover honey at 14¢@15¢; 2-pounds at 11¢@12¢. Extracted, 5¢@7¢. Demand for 1-lb. sections lively.

BEESWAX.—24 cts. per lb. Mar. 23. BLAKE & RIPLEY, 57 Chatham Street.

CINCINNATI.

HONEY.—We quote for extracted, 3¢@7¢. per lb. Nice comb brings 11¢@14¢. per lb. Demand fair.

BEESWAX.—Good demand, 20¢@25¢. per lb. for good to choice yellow. Mar. 29. C. F. MUTH & SON, Freeman & Central Av.

CLEVELAND.

HONEY.—Choice white 1-lb. sections, sells at 12¢@13¢; second quality white, 10¢@11¢; white 2-lb., 10¢@11¢. Buckwheat, 8¢@9¢. Extracted, 5¢@6¢. Market dull.

BEESWAX.—25¢. Mar. 9. A. C. KENDEL, 115 Ontario Street.

MILWAUKEE.

HONEY.—We quote choice 1-lb. sections at 11¢@12¢; 2-lb., 10¢@11¢. No call for dark. White extracted, in barrels and kegs, 9¢@10¢; in small packages, 6¢@7¢; dark, in barrels and kegs, 4¢@5¢. Demand good.

BEESWAX.—25¢. Mar. 28. A. V. BISHOP, 143 W. Water St.

Convention Notices.

The next regular meeting of the Cortland Union Bee-Keepers' Association will be held in Union Hall at Cortland, N. Y., on May 10, 1887.

D. F. SHATTUCK, Sec.

The next meeting of the West Lake Shore Central Bee-Keepers' Association will be held on May 26, 1887, in Kookring Hall, at Kiel, Wis.

FERD ZASTROW, Sec.

The May meeting of the Northwestern Illinois and Southwestern Wisconsin Bee-Keepers' Association will be held at Rockton, Ills., on Tuesday, May 24, 1887.

D. A. FULLER, Sec.

The Des Moines County Bee-Keepers' Association will meet on April 20, 1887, at the Court House at Burlington, Iowa, at 10 a.m. All interested in bee-keeping are invited to attend. Articles sent for exhibition, to the Secretary, at Middletown, Iowa, will be exhibited and returned or sold, as directed.

JOHN NAV, Sec.

The ninth annual meeting of the Texas State Bee-Keepers' Association will be held at McKinney, Collin Co., Tex., on May 4 and 5, 1887. All bee-keepers will find a hearty welcome. No hotel bills to pay. An interesting programme is ready. Come one, come all. B. F. CARROLL, Sec.

The Central Michigan Bee-Keepers' Association will hold the spring meeting in Pioneer Hall, Capitol Building, at Lansing, Mich., on April 26, 1887, at 10 a.m. A cordial invitation is extended to all bee-keepers. If any have troublesome questions, bring them with you, or send them to the President, at Lansing, Mich.

J. ASHWORTH, Pres.

The Chautauquan for May has the following table of contents:—Pedagogy: A Study in Popular Education, Third Paper, by Chancellor J. H. Vincent, LL.D.; Architecture as a Profession, by Mrs. Schuyler Van Rensselaer; A Stellar Paint Brush, by Chas. Barnard; Studies of Mountains, by Ernest Ingersoll; The Sunday Readings; Women in the Professions, by Julia Ward Howe; Common Errors in English, by Edward E. Hale; Practical Suggestions on English Composition, by Prof. T. Whiting Bancroft; Animals of the Arctic Region, by Gen. A. W. Greeley; Homes Built by Women, by Mary A. Livermore; Rich Men in Politics, by S. N. Clark; Sojourner Truth, by Harriet Carter; The Fruits of California, by Byron D. Halsted, Sc.D.; The Potter's Art, by Felicia Hillel; and Slave-Holding Ants, by Henry McCook, D.D.

Eureka Recitations is a good collection, containing nearly one hundred pieces, compiled by Mrs. Anna Randall Diehl. All those interested in providing an entertainment, should have this collection. It contains 128 pages, and is published by J. S. OGILVIE & CO., 57 Rose Street, New York. Price 12 cents.

Advertisements.

PURE ITALIAN BEES, bred ten years from imported mothers, at \$5 per colony. Hybrids loss. A. L. GOULD, Ridgeville, Ills. 16A3t

6 Horse-power Portable ENGINE and Boiler for \$150. Used but little. D. G. WEBSTER, 1082t BLAINE, Boone County, ILL.

WRITE

TO SMITH & GOODELL, Rock Falls, Ills., for low prices on Apian Supplies. 16A4t

W. Z. HUTCHINSON, Rogersville, Genesee Co., Mich.,

HAS the permission of the writer to publish the following:

"Forest City, Iowa, March 28, 1887. W. Z. Hutchinson, Rogersville, Mich.—Dear Sir, and Friend: I am in receipt of your pamphlet—'The Production of Comb Honey.' It is the nearest little thing I have seen lately. As a work of art it is as near perfection as printers in 'country offices' usually attain to. I venture the opinion that that cover was the work of a bee-keeper, or at least originated in his (your) creative brain. Nobody but a bee-keeper would have thought of such a unique and appropriate covering. The subject is treated in a very readable and creditable manner. I have been practicing substantially the same method, except the non-use of foundation. I shall try that this season.

Respectfully Yours, EUGENE SECOR."

Reader, if you wish to enjoy the same pleasure as did Mr. Secor, send 25 cts., and a copy of the book will be sent postpaid. 16A4t

BOTTOM REACHED.

ITALIAN BEES in Heddon Hive ... \$4.00
QUEENS, Untested, 80 cts.; Tested ... 1.60
NUCLEI without Queens, per Frame ... 70
To Nucleus add price of Queen wanted.

Remit by P. O. Money Order, to C. WEEKS, 15A4t CLIFTON, TENN.

DON'T BUY QUEENS, HIVES, SECTIONS or SUPPLIES before you send for my Catalogue and Price-List. Address,

J. P. H. BROWN, 8E0t AUGUSTA, GEORGIA.

THE NEW HIVE.



I have many more testimonials like the following, from Leading Bee-Keepers of this country. See 1887 Catalogue, to know what Prof. Cook, W. Z. Hutchinson, F. P. Stiles, T. L. VonDorn, F. Boomer, and Doctors Tinker, Mason, Miller and others think, after many of them have thoroughly tested the New Hive:

ST. CHARLES, Ills., Feb. 7, 1887. JAMES HEDDON:—Dear Sir: Your letter dated Feb. 3rd is received. In reply I can say that I have watched closely, and with interest, the discussions pro and con in our bee-periodicals in regard to your New Hive. Although I have not as yet been prepared, as you are aware, to give your New Hive a personal test, yet I can say, in harmony with Dr. Miller's declaration, that your invention is one that requires no practical experience, on the part of any one familiar with the art, to recognize it at once as a hive of very superior merits. Having, during the past year, given your New Hive and its management very careful thought and study, I am constrained to say that I believe it to be as far in advance of all other hives as the well-known Langstroth is in advance of the old box or beehive. I say I believe this, and in keeping with that belief, it is my present purpose to adopt your New Hive just as soon as I can shape my plans to that end. In short, I feel as though I CANNOT AFFORD to use any other hive. Having used the Langstroth, with its best modifications, since the spring of 1858, it is with a feeling of considerable regret that this resolution will compel me to bid this old friend a final adieu.

It is apparent to me that the novelty of your New Hive is as wide a departure as its utility is superior to all others. Notwithstanding there have been hives with features resembling parts of your New Hive, still I have never seen a combination, nor am I aware of any that possesses its functions. And right here is just where the invention and patentability exist, without which you certainly would never have received the many strong and well merited testimonials which I find in your Catalogue for 1887. Having for the past 25 years given the laws relating to patents more or less attention, I have no hesitation in repeating the word of Prof. Cook and G. M. Alvey, that the "rubbish" which is already "lugged forward," in futile attempts to anticipate your claims, does not "deserve a critical man's attention."

As you seem to desire the foregoing for publication, I have taken especial pains to say nothing that I might possibly regret in the future.

Fraternally yours, M. M. BALDRIDGE.

FOR WINTER.

HARTFORD, N. Y., April 9, 1887. We have had sleighing 134 days, and we are on runners yet. This is the first general flight my bees have had, and I had to dig the hives out of deep drifts in order that the bees might have fair sailing. Eighty-five wintered in my old chaff hives came through with a loss of half, and many more weak. Nine in your hives packed in 6 inches of chaff and setting 2 inches from bottom-board, not having a general flight in over 130 days, are all in good order. Four wintered on a single case are in best shape, with sealed brood. Stores the same in all the hives. Bees in the cellar are dying. J. H. MARTIN.

No Circulars sent out, unless asked for. Send address (plainly written) to

James Heddon, DOWAGIAC, MICH.

BEES and HONEY,

OR THE

Management of an Apiary for Pleasure
and Profit; by

THOMAS G. NEWMAN,
Editor of the American Bee Journal.

It contains 220 profusely illustrated pages is "fully up with the times" in all the improvements and inventions in this rapidly developing pursuit, and presents the apiarist with everything that can aid in the successful management of the honey-bee, and at the same time produce the most honey in its best and most attractive condition. Bound in cloth, \$1.00, postpaid.

A Liberal Discount to Dealers, by the Dozen or Hundred.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

The AMERICAN BEE JOURNAL for a year and the book, "Bees and Honey," will be sent for \$1.75.

BEAUTIFUL.

ALL-IN-ONE-PIECE Sections, smooth inside and out. Comb Foundation, Alsike Clover Seed, and everything needed in the apiary.

Send for free price list, and samples of Sections and Foundation.

M. H. HUNT,
BELL BRANCH, Wayne Co., MICH.
10Etfr Near Detroit.

SECTIONS.

WE make a specialty of the manufacture of **DOVE-TAILED SECTIONS** of the White Poplar, the whitest and best wood for the purpose. We make all styles and sizes, but recommend the Side-Opening Sections as superior to any other. The great accuracy and fine finish of our Sections are the admiration of everybody. Sample 3 cents. Price-List of Supplies free.

Address, **DR. G. L. TINKER,**
SEtfr NEW PHILADELPHIA, O.

Jones' Frame Pliers.



FOR taking frames out of hives, or moving them in any way desired. It is made of Japanned iron, and can be utilized in many ways. It has a long claw for loosening frames, and a hook which may be used for carrying other frames besides the one held by the Pliers. Price, 40 cts., by mail.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILLS.

Western BEE-KEEPERS' Supply House.



We manufacture Bee-keepers' supplies of all kinds, best quality at lowest prices. Hives, Sections, Comb Foundation, Extractors, Smokers, Crates, Honey Buckets, Vials, Feeders, Bee-Literature, etc., etc. Imported Italian Queens, Italian Queens, Bees by the lb., Nucleus or Colony. "Bee-keepers' Guide, Memoranda and Illustrated Catalogue" of 48 pages FREE to Bee-keepers. Address **JOSEPH NYSEWANDER,** DES MOINES, IOWA.

Shuck's Invertible Hives & Cases. I make L. hives of all styles. Greatly reduced prices. 806 Walnut st. 18Etfr

THOSE who expect to buy an Incubator will consult their interest by addressing, **RELIABLE INCUBATOR CO.,** 14A3t Decatur, Macon Co., Ills.

DR. FOOTE'S HAND-BOOK OF HEALTH,

HINTS AND READY RECIPES.

is the title of a very valuable book that gives a great amount of information, of the utmost importance to Everybody, concerning their daily habits of Eating, Drinking, Dressing, Sleeping, Bathing, Working, etc.

IT TELLS ABOUT

What to Eat, How to Eat it, Things to Do, Things to Avoid, Perils of Summer, How to Breathe, Overheating Houses, Ventilation, Influence of Plants, Occupation for Invalids, Superfluous Hair, Restoring the Drowned, Preventing Near-Sightedness, Parasites of the Skin, Bathing—Best way, Lungs & Lung Diseases, How to Avoid them, Clothing—what to Wear, How much to Wear, Contagious Diseases, How to Avoid them, Exercise, Care of Teeth, After-Dinner Naps, Headache, cause & cure, Malarial Affections, Croup—to Prevent.

IT TELLS HOW TO CURE

Black Eyes, Bolls, Burns, Chills, Cold Feet, Corns, Coughs, Cholera, Diarrhoea, Diphtheria, Dysentery, Dandruff, Dyspepsia, Ear Ache, Felons, Fetid Feet, Freckles, Headache, Hiccough, Hives, Hoarseness, Itching, Inflamed Breasts, Ivy Poisoning, Moles, Pimples, Piles, Rheumatism, Ringworm, Snoring, Stammering, Sore Eyes, Sore Mouth, Sore Nipples, Sore Throat, Sun-stroke, Swins and Insect Bites, Sweating Feet, Toothache, Ulcers, Warts, Whooping Cough, Worms in Children.

Price only 25 Cents. Sent by Mail, post-paid.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.



HUMPREYS'
HOMEOPATHIC
SPECIFIC No. 28

In use 30 years. The only successful remedy for **Nervous Debility, Vital Weakness,** and Prostration, from over-work or other causes. \$1 per vial, or 5 vials and large vial powder, for \$5. SOLD BY DRUGGISTS, or sent postpaid on receipt of price.—Humpreys' Medicine Co., 169 Fulton St., N. Y. 16A12t

100 COLONIES of Italian BEES for Sale. DANIEL WHITMER, South Bend, Ind. 9A9t

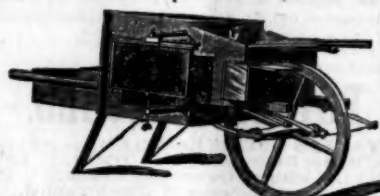
M. S. ROOP,
MANUFACTURER OF

APIARIAN SUPPLIES

And Dealer in BEES and HONEY.

Send for my New Circular.
Corner North 8th & Mill Streets,
12Etfr COUNCIL BLUFFS, IOWA.

Systematic & Convenient



DAVIS' PATENT HONEY CARRIAGE,
REVOLVING COMB-HANGER,
Tool Box and Recording Desk Combined.

Price, complete, only..... \$18 00.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

100 COLONIES of Italian and Hybrid Bees for sale at bottom figures. Write for prices.

A. J. & E. HATFIELD,
12Etfr SOUTH BEND, IND.

ARMSTRONG'S New Reversible Hive.

The cheapest, simplest and most practical Hive ever offered to the public.

H. D. Cutting, of Clinton, Mich., says:—"Let me congratulate you on having such a good hive; your 'reversible' section-case is perfection itself."

Sample Hive, complete and painted, \$2.50.

Send your name and post-office address, plainly written on a postal card, and receive our 32-page Illustrated Catalogue, free.

Address, **E. S. ARMSTRONG,**
9A1tf JERSEYVILLE, ILLS.

Extracted Honey For Sale.

We have a large quantity of **CHOICE WHITE EXTRACTED HONEY**, in kegs holding from 200 lbs. to 225 lbs. each, which we will deliver on board the cars at 7 cents per lb. Orders solicited.

THOS. G. NEWMAN & SON,
923 & 925 West Madison St., CHICAGO, ILL.

BEES for SALE, Cheap.

100 Colonies of American-reared Italian Bees, best strain, strong, and in 10-frame wired Simplicity hives; for sale at \$8.00 per Colony. **Z. A. CLARK,** 8Etfr ARKADDELPHIA, ARK.

BEES! 300 COLONIES ITALIANS

READY for spring delivery at 80 cts. to \$1.00 per pound, according to time. Choice Queens and Brood cheaper in proportion. Also **ADJUSTABLE HONEY-CASE** and other Supplies. Circular free. **OLIVER FOSTER,** 11A1t Mt. Vernon, Linn Co., Iowa.

100 Colonies of Bees

FOR SALE CHEAP.—In 8 and 10 frame Langstroth hives. Good condition. 14A3t **I. R. Hadfield,** Waukesha, Wis.

DRAKE & SMITH,

Successors to A. E. Manum, Bristol, Vt.

MANUFACTURERS of the **BRISTOL Bee-Hive**, the Standard Hive of Vermont.

SECTION HONEY BOXES,

made from white poplar, (the best timber in the world for honey-boxes), Clamps, and a **Wood Thumb-Screw** for Clamps, Separators and Wood Sides. **LIGHTNING GLUERS** Shipping-Crates, Bee-Escapes, Bee-Feeders, and

MANUM'S BEE-SMOKERS,

all made of the best material and in a workman-like manner. Send stamp for Sample SECTION and Price-List. 2E12t

Shirley's Contractible Bee-Hive.

Descriptive Circular now ready. Send for it. Address, **W. H. SHIRLEY,** 14A3t Millgrove, Allegan Co., Mich.

BEES

Guide to Bee-Keeping, & Catalogue of CHAS. ROBERT and Best Supplies, mailed free. Address **J. L. Rust & Co.** New Carlisle, O.

THE HORSE,

By E. J. KENDALL, M. D.

A TREATISE giving an index of diseases, and the symptoms; cause and treatment of each, a table giving all the principal drugs used for the horse, with the ordinary dose, effects and antidote when a poison; a table with an engraving of the horse's teeth at different ages, with rules for telling the age of the horse; a valuable collection of recipes, and much valuable information.

Price 25 cents.—In English or German.

THOS. G. NEWMAN & SON.,
923 & 925 West Madison Street, Chicago, Ill.